Historic, archived document

Do not assume content reflects current scientific knowledge, policies, or practices.

UNITED STATES DEPARTMENT OF AGRICULTURE

Radio Service

OFFICE OF INFORMATION

LIBRARY
RECEIVED
☆ JAN 14 1937 ☆
U. S. Department of Agriculture

HOUSEKEEPERS' CHAT

Thursday, January 21, 1937

(FOR BROADCAST USE ONLY)

Subject: "A MODERN ALADDIN'S LAMP." Information from the Bureau of Agricultural Engineering, U. S. Department of Agriculture. Publication available, Circular 406, "Oil Burners for Home Heating."

--ooOoo--

Last evening I happened to be reading the story of Aladdin and his wonderful lamp to one of the children. Right in the middle of it we heard beneath our feet a sort of muffled, steady, low sound coming through the floor.

"What's that noise?" asked my nephew.

"Oh, just the oil burner coming on," I replied. "It will stop soon."

"What made it go?" he persisted.

"The thermostat. When the house temperature goes below 70 degrees the thermostate works a switch that turns on the blower and the oil starts burning. When the radiators are hot enough, it stops."

"Why, it's just like Aladdin and the genie of the lamp," he reflected. "Aladdin would rub the lamp and the genie came and did whatever he wanted. The thing that starts the oil burner just rubs something and the genie of the furnace comes."

"That's one way to look at it," I said. For after all, those of us who have oil burners for home heating are almost completely freed from the work formerly associated with keeping warm in winter. With proper thermostatic control the mechanism practically takes care of itself, and the cellar- in fact, all the house,- is much cleaner. The younger children can have playrooms in the basement and the older ones a game room where the ash cans used to be.

A good many of my listeners, I have no doubt, have oil burners, or are considering putting them in, or adapting the present heating system to burn oil. So I asked Arthur H. Senner of the Bureau of Agricultural Engineering of the U. S. Department of Agriculture to give me a few of the points one ought to know when selecting an oil burning or operating unit. He said:

"In the first place, whether oil or some other fuel is used in a house, the entire heating plant must be properly designed and installed or you won't have a warm house. The circulating system must be correctly proportioned and set up, and the boiler or furnace must be large enough for the number of rooms to be heated.

"When it comes to the type of oil burner to select, there is no single direct answer. Each type of burner has a different efficiency in any given boiler. Some types of boilers and burners naturally operate together better than do other combinations. For example, vertical-rotary burners do best in round boilers, or those in which the length is at most not more than twice the width. They generally do not operate well in rectangular boilers of rather elongated firebox dimensions. The pot-or gun-type burner can almost always be used in either round, square, or elongated types of fire-pots. The local representative of each type of burner you may be considering is usually able to recommend changes needed to suit his particular type.

"I suggest that your listeners send to the U. S. Department of Agriculture for the free circular, No. 406, on 'Oil Burners for Home Heating' in which they will find a detailed explanation of the differences in burners and other parts of the necessary equipment. In selecting a burner it is wise to consider one that is handled by a reliable organization which employs capable men to service their product. Such an organization is likely to handle at least a reasonably good product.

"If you live in an isolated district where the roads are often impassable for the service man during heavy winter weather, it might be wise to choose a type of burner that could be readily removed by inexperienced home labor so you could return temporarily to coal should anything go wrong with the oil burner or the electric current. It is also best to install a large fuel tank rather than to depend on weekly or fortnightly filling.

"All burners make some noise when they come on, but seldom enough to be objectionable in a modern house. Do not choose a very noisy burner.

"As to which fuel oil to buy,- that is determined largely by the kind available in your locality and what the manufacturer recommends for his particular oil burner. The vaporizing burners invariably are designed to burn only No. 1 or No. 2 fuels. The atomizing burners sometimes use oil as heavy as No. 3. It is almost impossible to compare fuel oils on a cost basis since the shapes and heat absorbing surfaces of boilers differ so much.

"When one is buying complete new oil burner equipment, a boiler-burner unit may be selected which will be properly designed for burning oil only. It may inclue a hook-up for year-around hot water. However, it is very common practice to install an oil-burning unit in connection with a former coal-burning furnace by making some adaptations in the construction and shape of the fire-box. This is a problem for the local heating engineer or oil-burner distributor.

"The automatic control of an oil-burner by means of a thermostat is what appeals to everyone. We even have so-called 'clock' thermostats which permit room temperature to be lowered at night during sleeping hours, but which will raise it in the morning so that the house is warm when the family gets up. This type of control is also made to work during the day if everyone is away. Such control of the burner means considerable fuel saving with no loss of comfort. It's truly modern magic. <u>While we have been talking here about automatic oil heat, excellent automatic heat can also be had with either coal or gas when the fuel and equipment are available at attractive prices.</u>

"Every oil-burning system should have an emergency or safety control, in case the pilot light is extinguished or the burner fails to function while oil is flowing into it. Such a control stops the motor and cuts off the supply of oil.

"The size of the oil tank chosen is dictated by seasonal fuel consumption and the local system of delivery, whether at regular intervals or only on call. Oil burner manufacturers furnish instructions for the care of their products, and these should be strictly followed. Periodic overhauling and oiling by a competent service agent is advisable."

#####